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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,760	12/14/2001	Je Young Chang	42390P13008	2534

7590

08/04/2005

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EXAMINER

PATEL, NIHIR B

ART UNIT

PAPER NUMBER

3743

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/022,760

Applicant(s)

CHANG ET AL.

Examiner

Nihir Patel

Art Unit

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
 Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on July 26th, 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 13, 19, 20 and 22-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 17, 21, 26 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Furuya (US 6,504,720).

Referring to claim 1, Furuya discloses a cooling unit for cooling heat generating component, circuit module including the cooling unit, and electronic apparatus mounted with the circuit module that comprises an absorber section 20 (see figure 5 and column 6 lines 35-40) of the heat pipe 16 (see figure 5 column 6 lines 30-35) attached to a first end of a base of the heat pipe to remove heat from a heat spreader, wherein the absorber section having a size of at least a surface area of the heat spreader (see figure 5); and a dissipater section 21 (see figure 5 and

Art Unit: 3743

column 6 lines 35-40) of the heat pipe attached to a second end of the base of the heat pipe, wherein a width of the dissipater section is greater than the width of the base of the heat pipe, and the dissipater section having a size of at least a surface area of the absorbent section (see **figure 5**).

Referring to claims 19 and 23, Furuya discloses an apparatus wherein the absorber section and the base of the heat pipe are formed of thermally conductive material selected from the group including copper, a copper hollow, and aluminum (see **column 6 lines 35-40**).

Referring to claim 22, Furuya discloses an apparatus wherein the absorber section and the dissipater section are the same size (see **figure 5**).

Referring to claim 13, Furuya discloses an apparatus that comprises a central processing unit 9 (see **figure 2 and column 6 lines 10-15**); a heat absorber 20 (see **figure 5 and column 6 lines 35-40**) attached to a first end of a heat pipe 16 (see **figure 5 column 6 lines 30-35**) and having a size of at least a surface area of the heat spreader (see **figure 5**); and a heat dissipater 21 (see **figure 5 and column 6 lines 35-40**) attached to a second end of the base of the heat pipe, wherein a width of the heat dissipater is greater than a width of the base of the heat pipe (see **figure 5**), and the heat dissipater having a size of at least a surface area of the heat absorber (see **figure 5**).

Referring to claim 25, Furuya discloses an apparatus wherein the heat absorber removes heat from the heat spreader (see **column 6 lines 35-40**).

Referring to claims 20 and 24, Furuya discloses an apparatus wherein the heat absorber is attached to the heat spreader by a thermal interface material (see **column 8 lines 20-40**).

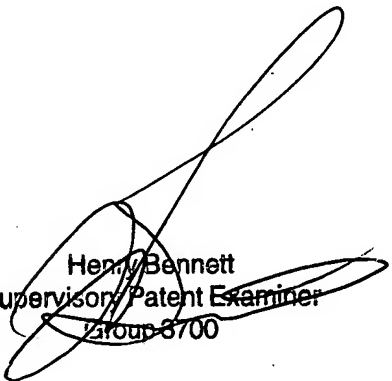
Art Unit: 3743

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Nihir Patel whose telephone number is (571) 272-4803. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful the examiner supervisor Henry Bennett can be reached at (571) 272 4791.

NP
July 27th, 2005



Henry Bennett
Supervisory Patent Examiner
Group 3700